

# United States Patent and Trademark Office



UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO
10/053,512	11/02/2001	Mike Carlomagno	018190-307	1668
75	90 09/04/2003			
James W. Peterson BURNS, DOANE, SWECKER & MATHIS, L.L.P. P.O. Box 1404			EXAMINER	
			LAUCHMAN, LAYLA G	
Alexandria, VA 22313-1404				
			ART UNIT	PAPER NUMBER
			2877	
			DATE MAILED: 09/04/2003	

Please find below and/or attached an Office communication concerning this application or proceeding.

<u>.</u>		cm					
	Application No.	Applicant(s)					
	10/053,512	CARLOMAGNO ET AL.					
Office Action Summary	Examiner	Art Unit					
	L. G. Lauchman	2877					
The MAILING DATE of this communication app Period for Reply	ears on the cover sheet with th	e correspondence address					
A SHORTENED STATUTORY PERIOD FOR REPLY THE MAILING DATE OF THIS COMMUNICATION.  - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication.  - If the period for reply specified above is less than thirty (30) days, a reply If NO period for reply is specified above, the maximum statutory period w Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).  Status	36(a). In no event, however, may a reply be y within the statutory minimum of thirty (30) vill apply and will expire SIX (6) MONTHS fr , cause the application to become ABANDO	days will be considered timely. Tom the mailing date of this communication. The mailing date of this communication.					
1) Responsive to communication(s) filed on	<u> </u>						
2a) ☐ This action is <b>FINAL</b> . 2b) ☑ Th	is action is non-final.						
3) Since this application is in condition for alloward closed in accordance with the practice under Disposition of Claims							
4) Claim(s) 1-28 is/are pending in the application	1.	•					
4a) Of the above claim(s) is/are withdrawn from consideration.							
5) Claim(s) is/are allowed.							
6) ☐ Claim(s) <u>1-28</u> is/are rejected.							
7) Claim(s) is/are objected to.							
8) Claim(s) are subject to restriction and/o	r election requirement.						
Application Papers							
9)⊠ The specification is objected to by the Examine	r.						
10)☐ The drawing(s) filed on is/are: a)☐ accept	oted or b) objected to by the E	xaminer.					
Applicant may not request that any objection to the							
11)☐ The proposed drawing correction filed on	_ , ,,	proved by the Examiner.					
If approved, corrected drawings are required in rep	•						
12)☐ The oath or declaration is objected to by the Ex	aminer.						
Priority under 35 U.S.C. §§ 119 and 120							
13) Acknowledgment is made of a claim for foreign	n priority under 35 U.S.C. § 119	9(a)-(d) or (f).					
a) ☐ All b) ☐ Some * c) ☐ None of:							
Certified copies of the priority documents							
2. Certified copies of the priority document	• •	·					
<ul> <li>3. Copies of the certified copies of the prior</li> <li>application from the International Bu</li> <li>* See the attached detailed Office action for a list</li> </ul>	reau (PCT Rule 17.2(a)).	)					
14) Acknowledgment is made of a claim for domesti	c priority under 35 U.S.C. § 11	9(e) (to a provisional application).					
a)  The translation of the foreign language pro							
Attachment(s)							
1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s)		nary (PTO-413) Paper No(s) nal Patent Application (PTO-152)					

### Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Claim 4 states that the tool head comprises a printing head, however, no support for that was found in the Detailed Description.

## Claim Objections

Claim 22is objected to because of the following informalities: Claim 22 should be dependent on Claim 16, not Claim 1. Appropriate correction is required.

#### Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1,3-11, 13-15, 16-22, 24-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Hosotani et al (US 6,246,789).

As to Claims 1, 3-5, the patent teaches a component mounting apparatus, comprising: a frame (see FIG. 1), a tool head 15 connected to the frame, the tool head

being adjustably movable in X and Y directions with respect to the frame (see col. 9, lines 32-62), a component platform 16 connected to the frame, the component platform being adjustably movable in X and Y directions with respect to the frame, and an optical system 19 (see Fig. 6) positionable to simultaneously view the tool head 15 and the component platform 16. The tool head is a component positioning head. The component platform is a PCB holder.

As to Claims 6-8, the patent teaches everything as applied to Claim 1 above, in addition a first positioning screw for moving the component platform in the X direction, and a second screw for moving the component platform in the Y direction (see col. 17, lines 55-67, and col. 18, lines 1-7).

As to Claims 9-11, the patent teaches everything as applied to Claim 1 above, in addition at least one positioning rod 231 (see Fig. 8) for moving the tool head in the X direction, and at lest one positioning rod 231 for moving the tool head in the Y direction. The tool head is slidably movable along the positioning rod (see Col. 9, lines 39-44), the positioning art is slidably movable in the y direction and the tool head is slidably movable in the X direction.

As to Claims 13-15, the patent teaches everything as applied to Claim 1 above, in addition a camera19 a, and a beam splitter, the beam splitter is being movable (col 10., lines 1-27), retractable such it can be moved away from a location between the tool head and the component platform.

As to Claims 16, 17-21, 26 the patent teaches a method for alignment an electrical component, comprising (see Fig. 1 and 8): positioning the tool head 15 while the component platform 16 is at fixed position, positioning the component platform 26 while the tool head is at fixed position, simultaneously viewing the positions of tool head and the component platform with an optical system 19 positioned between the tool head and the component platform. Positioning the platform tool head and the component platform comprises moving the tool head and the component platform in the X and Y directions.

As to Claims 22, 24, 25, 27, 28 the patent teaches everything as applied to Claim 16, in addition positioning a movable beam splitter 19d between the tool head and the component platform, and viewing through the beam splitter with a camera 19a. The tool head is a component positioning head. The platform is a PCB holder.

#### Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2, 12 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hosotani et al (US 6,246,789) as applied to claims 1 and 16 above, and further in view of Blais et al (US 5,044,072).

Art Unit: 2877

The patent '789 teaches everything as applied to Claims 1 and 16, except that the tool head comprises a soldering/desoldering tool head. However, the patent '072 discloses a method and apparatus for alignment and placement of electrical component, where in the tool head (see Figs. 1 and 4, col.4, lines 23-29) comprises a soldering tool head. It would have been obvious to use a soldering tool head in the invention of Hosotani, since it would have integrated the electrical component into the printed circuit board.

As to Claim 12, the patent '789 teaches everything as applied to Claim 1, except for the for the first and the second pair of positioning rods and a pair of positioning arm. The function of the rods and the arm is to make the tool head slidably movable along the X and Y directions. The tool head 15 of the patent '798 is movable along the X and Y directions by different means. However, since the function of moving the tool head in X and Y direction is being performed, the structure lacks criticality. Therefore, it would have been an obvious matter of design choice to select a certain structure of rods, arms, or screws to move the tool head in the X and Y directions.

#### Conclusion

Papers related to this application may be submitted to Technology Center 2800 by facsimile transmission. Papers should be faxed to TC 2877 via the PTO Fax Center located in CP4-4C23. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CP4 Fax Center number is (703)308-7722 or 308-7724.

If the Applicant wishes to send a Fax dealing with either a Proposed Amendment or for discussion for a phone interview then the fax should:

- a) Contain either the statement "DRAFT" or "PROPOSED AMENDMENT" on the Fax Cover Sheet; and
  - b) Should be unsigned by the attorney or agent.

Application/Control Number: 10/053,512

Art Unit: 2877

This will ensure that it will not be entered into the case and will be forwarded to the examiner as quickly as possible.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to L. G. Lauchman whose telephone number is (703) 305-0071.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC receptionist whose telephone number is (703) 308-0956.

L. G. Lauchman Patent Examiner Art Unit 2877 8/19/03/Igl

Frank G. Font Supervisory Patent Examiner AU 2877